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AN ASSESSMENT OF THE CHINESE AIR THREAT
TO INDIA IN THE YEAR 2000

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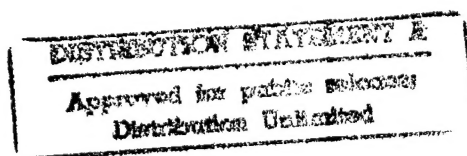
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ABSTRACT

TITLE: An Assessment of The Chinese Air Threat to India in the Year 2000.

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China with her booming economy, wants to be recognized as a major player in shaping future world events. To achieve this she is diverting considerable attention to modernizing her armed forces. Her recent acquisitions of state of the art aircraft have important ramifications for India, particularly when there is an outstanding border dispute between the two nations that resulted in the Sino-Indian war of 1962. Though with an increasing level of bilateral dialogue,, relations between the two Asian neighbors have improved, yet, one cannot discount the possibility of a settlement being deadlocked. In such a situation, the geo-political outlook and threat perceptions of both nations would dictate the outcome. Any future conflict between the two nations would see extensive use of air power over an area that imposes some unique limitations on air power. This paper analyses the geo-political environment and thereafter focuses on the employment of likely air strategies.

BIOGRAPHICAL SKETCH

Group Captain Karan Singh Chhina was commissioned in the Indian Air Force in 1970. He is a graduate of the Defense Services Staff College, Wellington, and the Higher Air Command Course, Secunderabad, India. He has commanded a MiG-21 squadron, and in his last assignment was the Chief Operations Officer of a fighter base. He has been interested in the Chinese Air Force from two standpoints; firstly, her recent modernization: secondly, it would help better understanding of India's security interests. Group Captain Chhina is a graduate of the Air War College class of 1995.

Table of Contents

DISCLAIMER	ii
ABSTRACT	iii
BIOGRAPHICAL SKETCH	iv
INTRODUCTION	1
CHINA'S GEO-POLITICAL OUTLOOK AND THREAT PERCEPTIONS	6
INDIA'S THREAT PERCEPTIONS VIS-A-VIS CHINA	9
CHINESE AIR FORCE: STRUCTURE AND MODERNIZATION PLANS	12
LIKELY CHINESE AIR STRATEGY	16
COUNTERMEASURES BY INDIA	20
CONCLUSION	24
APPENDICES: MAPS OF INDIA'S BORDER WITH CHINA	26
BIBLIOGRAPHY	27

AN ASSESSMENT OF THE CHINESE AIR THREAT

TO INDIA IN THE YEAR 2000

Introduction

China draws extensive strength from being recognized as a more than 5000 year old civilization. In the past China's geographical dimensions were not very clearly defined and kept changing over a period of time. This was because a number of ethnic groups within and outside that nation were vying for influence over each other. The limit of such influence was restricted in some areas by natural geographical barriers that prevented a spillover of any popular uprisings or revolutions. Between the Asian sub-continent and the Chinese landmass the Himalayas and the inhospitable high altitude vastness of Tibet form a very formidable physical barrier that effectively curbed Chinese influence in the region. Some of the terrain that forms this natural border with China is so treacherous that even now there remain areas that have not been surveyed from the ground. For cross travel a few passes through the Himalayas were the only links. These passes were used for routine migration by shepherds in search of better pastures. They also formed ancient trade and exploratory routes. Gautam Buddha a religious teacher traveled from India to China via Tibet in the sixth century B.C. spreading Buddhism. The most famous Chinese pilgrim to India was Hieun Tsang in 629-45 AD. He traveled extensively in India. Other than such solitary visits Chinese remained effectively from the Indian landmass.

India attained her independence through a unique and well-executed campaign of non violence. Consequently, in her formative years there was considerable leaning on the traditional principle of *Ahimsa* – a Buddhist and Hindu doctrine of non violence expressing belief in the sacredness of all living creatures. This principle received a hard knock, as by 1971, India had to face four wars; one with China (1962) and three with Pakistan (1947, 1965, 1971). The Indian defeat in the 1962 Sino Indian conflict had an important lesson for India. The lesson being that in this world of realpolitik *Ahimsa* has only historical and literary value; it is military might that eventually counts.

The Chinese invasion and annexation of Tibet in the 1950's and her subsequent claim of sovereign Indian territory led to the brief Sino-Indian conflict of 1962. Relations between the nations remained inimical for the next decade and a half. It is only since the late eighties that there has been a thaw in the relationship. The development is primarily because of an increasing realization that belligerent rhetoric between neighbors cannot bring about solutions. Moreover, both nations have embarked on a path of economic liberalization, and realize that in order to reap the fruits of liberalization they would have to look at their outstanding differences from a changed perspective. To solve this border issue amicably, a joint working group has been formed that is meeting periodically.

China has made great strides politically. She has improved her relations with Russia. Within the US, she has considerable pressure groups by way of prosperous Americans of Chinese origin and the American business lobby that has huge investments in China. Despite China's abysmal human rights record, these pressure groups have achieved notable successes in

influencing the US Government policy towards China. One example has been the granting of Most Favored Nation status to China. Hong Kong with her huge foreign exchange reserves and global marketing skills would merge with China in 1997. This merger would act as an added catalyst to the Chinese economy. With the break up of the Soviet Union, and her economy in a decline, some quarters look upon China presently as the lone major socialist global power.¹

China has also embarked upon a military modernization program. She has recently cut back on man-power and instead has gone in for new acquisitions that would provide an immensely greater punch to her armed forces. Her defense industry has gained valuable experience from reverse engineering and absorption of high technology. She has been one of the leading Third World nations in foreign arms sales. With her newly acquired clout she has started flexing her muscles in regard to claims on the disputed Spratly and Paracel islands in the South China Sea. Moreover, China wants re-unification with Taiwan. China's Air Force modernization has implications for India, for, unlike the 1962 conflict, both Air Forces would play a decisive role towards the outcome of the conflict. Hence, this paper delves into the geopolitical situation of both nations and addresses the Chinese air threat to India in the year 2000. The paper also analyses India's likely response.

Background

After W.W.II, Chiang Kai shek, the nationalist Chinese leader, was unable to stop the popular movement led by Mao De Zong. This led to China becoming a communist nation in 1949. She drew inwards but gained recognition as a power after her involvement in the Korean

¹ Samuel S Kim, *China as a Regional Power*. Global Studies China, September 1992

war. Both India and China had been exploited by the Western colonial empires. This legacy formed a common bond in the outlook of both nations. India after independence tilted towards a policy of non alignment to keep out of the emerging cold war and super power rivalry. China because of her communist ideology aligned towards the erstwhile Soviet Union. After a brief period of friendship with the Soviet Union differences arose between the two nations. These differences were fundamentally ideological and as a result of the Soviet Union not taking a position against Western imperialism as well as the Soviet Union's perceptions about China's policy of peaceful coexistence. After Stalin's death, China also felt that under Mao De Zong's leadership she was better placed than the Soviet Union to hold the mantle of the communist movement. Moreover, the Soviet Union's low key attitude towards anti-colonial movements along with a border dispute with China led to the two nations drifting apart. Sino-Indian relations in the beginnings of the fifties were in an upswing with the popular Indian catch phrase *Hindi Chini Bhai Bhai* (Indians and Chinese are brothers). Events slowly started taking place that gradually brought about a souring of this relationship.

The origin of the Sino-Indian differences was the 1950's Chinese crackdown in Tibet that led to a stream of Tibetan refugees fleeing to India. The spiritual head and leader of Tibet – 'The Dalai Lama' escaped to India in 1959. During the initial occupation of Tibet the Chinese constructed a road in the Aksai Chin region of India linking Sinkiang with Tibet (see maps at Appendices). India was unaware of this road construction and later when she came to know of it adopted a mild and conciliatory attitude in her protest to China. Her rationale was that in an environment of a growing level of goodwill and friendship between the two nations the matter could be resolved through bilateral negotiations. The Chinese stalled protests by India for

contrived and unconvincing reasons. Over and above this the Chinese published fresh maps that laid claims to new and additional areas of Indian territory. The entire state of Arunachal Pradesh (in NE India bordering China), some areas bordering China in the Central sector and portions of the state of Jammu and Kashmir (some already under her occupation) were shown as Chinese territory. Tensions gradually rose as the Indian leadership realized that the Chinese had quietly occupied vast tracts of Indian territory and were laying claims to more areas. Border clashes between Indian and Chinese patrols increased the level of tension that ultimately resulted in the Sino-Indian conflict of 1962. India lost the war for two reasons; firstly she did not heed the ominous goings on in Aksai-Chin and remained militarily unprepared thinking that the Chinese could be made to listen to reason through bilateral negotiations. Secondly, political meddling in the Indian Army's affairs led to the placement of officers with questionable leadership in key positions². After the war though the Chinese vacated the territories that they had occupied in the North-East, they retained possession of the additional areas that they had gained in the Aksai-Chin sector. As of now, China is under illegal occupation of 15000 square miles of sovereign Indian territory.

For the next fifteen years relations between China and India remained frigid. In the intervening years India fought two wars against Pakistan (1965 and 1971). During the 1965 war the Chinese in an attempt to reduce pressure on their ally Pakistan put up token claims on a few border pickets. India rejected them. During the 1971 conflict with Pakistan, India insured herself against a possible Chinese intervention by having a friendship treaty with the Soviet Union. Soviet military exercises close to the Chinese border provided a deterrent to China in

² Neville Maxwell, India's China War

case she decided to open a front with India. A period of 15 years elapsed before relations started improving in the eighties with the path breaking visit of the late Prime Minister of India Rajiv Gandhi.

China's Geo-Political Outlook and Threat Perceptions

Deng Xiaoping's plans of steering China towards a great power are showing results. Since 1978 – The time when the reforms were initiated, the nation has made great strides. China's GDP of 2.85 trillion dollars on a purchasing power parity scale is the second largest in the world. It has 43.7 billion dollars in foreign exchange reserves³. Some of the coastal areas have shown a consistent and high average annual growth. Moreover, at the present rate of growth it is estimated that by the year 2020 the Chinese economy will become the world's largest, or second largest.⁴ This impressive growth of the Chinese economy would progressively result in huge surpluses and foreign exchange reserves that would allow China to increasingly modernize her armed forces.

China wants her present progress unimpeded by regional tensions. That is why she would rather postpone or stall issues to a time when she actually has a more modern military as well as an even stronger economic base. This would assist her extensively at the negotiating table. In the recent past she has made known her desire about regaining historical boundaries. But these are essentially directed towards unification of Taiwan as well as claims on the reportedly oil rich Spratly and Paracel islands.

³ *Asia Week*, December 21-28 1994

⁴ Dr. Yanan Ju, China; *The Fourth Power*, ROA National security Report Dec 1994

China wants to gradually shed her image of a regional hegemonist and wants to be recognized as a powerful and mature nation befitting her status as a permanent member of the UN. She has developed regional friendships sometimes with the maxim – My enemy's enemy is my friend. Her relationship with Pakistan falls into this category. China has developed strong bonds with her; the large inventories of Chinese arms with Pakistan, sale of M-11 missiles as well as assistance in Pakistan's nuclear weapons program are a few examples of this relationship. She has also supplied arms to Bangladesh and Myanmar in order to expand her influence in South Asia. China is also persistently improving her relations with the ASEAN countries that have ethnic Chinese occupying some of the top rungs of the economic ladder in those countries. In spite of her endeavors at forging new relationships, some of her smaller neighbors are suspicious and fearful that China with the backing of a strong economy and a modernized force will tend to monopolize influence in the region in an attempt to thrust unwelcome decisions on them.

China considers re-unification of Taiwan as her highest priority and remains most concerned about the island's potential to declare independence. Taiwan on the other hand, has been on an arms shopping spree in order to prevent any takeover by China. She has placed an order for 150 F-16's, has bought Mirage 2000's from France and has even developed her own fighter.

China has mended fences with Russia. High level exchanges, including between President Yeltsin and Jiang Zeming have taken place. More than 30 bilateral accords have been signed since 1992 and China in a typical reversal of roles has become a creditor to Russia by

giving large loans and commodity credits.⁵ Mutual troop reductions have taken place and negotiations are going on to demarcate the entire border.

Technologically, China is much inferior to Japan but Japan visualizes a future threat from China. This is particularly so with China's indifferent attitude in regard to nuclear weapon tests. She is the only nuclear weapon state at present that has signed the Non Proliferation Treaty and still conducts weapon tests. Another potential source of conflict is the Japanese Island chain of Diaoyutai/Senkaku. Moreover, there are widespread fears that China's new wealth is being used to upgrade its military, while the nation's leaders have started asserting historical claims all along its borders.⁶

China also perceives a threat in this unipolar world from American dominance. Security specialists in China view the US as becoming increasingly arrogant after the collapse of the Soviet Union. The spectacular victory of the US forces during the Gulf War has also contributed to this belief. Of late another disturbing factor has been the uneasy relationship with regard to bilateral trade with the US. Forthcoming trade wars between the two nations can affect the budding economic relationship. Furthermore, according to David Shambaugh noted China watcher the Chinese remain paranoid over the US attempts towards a 'peaceful evolution' to undermine Communist Party rule in China. Moreover, China has been increasingly critical of

⁵ David Shambaugh, *Growing Strong: China's Challenge to Asian Security*, , Survival, Vol 36 No 2, Summer 1994

⁶ Merrill Goozner, *US Allies in Asia Fear China's Growing Might*, , Chicago Tribune, Jan 30 1995

the US trying to dominate a post Cold War Asia,⁷ though of late Chinese views on the subject have been restrained.

China appears to be taking an increasingly assertive stand in regard to the re-unification of Taiwan and the disputed island territories in the South China Sea. In contrast to her relations with the US, she has much improved relations with Russia. Border talks with India are progressing though there seems to be no easy or early solution.

India's Threat Perceptions vis-à-vis China

India initiated change to a free market economy three years ago and has started reaping the initial benefits. Her currency has remained stable and foreign exchange reserves have grown from a low of 1.2 billion dollars in 1991 to more than 23 billion dollars by January 1995. Unlike China, the economic liberalization policy in India is perceived in some quarters of the country as a sell out of the nation's interest to foreigners. A democratic India has a disadvantage of satisfying and accounting to her people for all the government's policies. As a result, the government is occasionally constrained to adopt populist measures. This is India's greatest handicap with respect to China and can result in the slowing down of the economic liberalization program. Notwithstanding this, at the commencement of the reforms the Indian economy after slowing down for a short spell managed to rebound and has shown an average growth rate of between five and six percent.

⁷ Ibid, David Shanbaugh

India maintains friendly relations with all her neighbors. However Pakistan's involvement in the insurgency in the Indian state of Jammu and Kashmir manifests itself as a short term threat to India. During the past five years the level of insurgency has grown and it has been deliberately given an Islamic Fundamentalist slant in order to gain support of the oil rich middle east Arab states. Both nations have been on the brink of war on two recent occasions. Pakistan and China share a close relationship and it would not be in India's interest to have a hostile Pakistan in a future Sino-Indian conflict. The worst case scenario for India would be a two front war.

The mid seventies saw Chinese strident support for Pakistan change to a more evenhanded one towards India and by 1976 Sino - Indian relations were restored to the ambassadorial level. Nevertheless an aspect that bothers India is that China as such does not face any hostile aggression yet is going in for large scale modernization; notably the new aircraft acquisitions and aerial refueling modifications. This is inconsistent with the end of the cold war with nations enjoying the peace dividend. These acquisitions would give China a sizable jump in offensive capability.

India sometimes discerns a degree of incongruity in Chinese philosophy. In February 1979 during the visit of the Indian foreign minister to Beijing as part of the normalization process, China invaded Vietnam – to teach her a lesson. More recently during 1986 in the Arunachal Pradesh state of India bordering China there was a Chinese intrusion into Indian territory. Tensions mounted once again and Deng Xiaoping talked of China having to 'teach

India a lesson.' Such a roller coaster relationship was capped by a Chinese 3 Megaton nuclear test during the President of India's first visit to China in 1993.

Embarrassing timing and a propensity of teaching lessons to her smaller neighbors reflect the sensibilities of the Chinese political thought and motivations. Though presently there are increasing levels of trade and bilateral talks between the two nations, there persists an undercurrent of mutual distrust. The unsettled boundary question though dormant has the potential of a hardening of stance by both nations. Moreover, with the gains of a booming economy and modernization of her defense forces underway, China in the near future is likely to adopt an increasingly obdurate position with regard to vacation of the occupied Indian territory.

India maintains good relations with Russia. But Russian help that could checkmate China is no longer available. Russia views both India and China on a balanced scale and it would be wrong on India's part to assume that she could rely on Russian support in a future Sino-Indian conflict.

China has been trying to influence Myanmar and Bangladesh through aid and cheap military sales. She is assisting Myanmar build a Naval base on Hyanggyi Island at the mouth of the Bassein River on the Indian Ocean. There have been reports that Myanmar may let China use the Naval base and that China has a signal station on Great Coco Island in the Bay of Bengal⁸. These bases would provide the Chinese Navy with increasing reach in the Bay of Bengal and the neighboring littoral area.

⁸ Julia A Ackerman and Michael Collins *Chinese Air Power Rev' Up* Air Force Magazine Jul 93.

India would require to take an increasing interest towards the Pacific Rim Countries to develop better and stronger ties. Collectively the ASEAN countries have apprehensions of China's influence and her disputed claims on island territories in the South China Sea. The ASEAN countries have also expressed concern on the increasing reach and capabilities of the Indian Navy. This was particularly so in the late eighties when India had operated a Soviet nuclear powered submarine on lease to train Indian crews. Notwithstanding India's naval capability, India has no territorial dispute with any ASEAN or other littoral states in the region and maintains friendly relations with them. However the ASEAN and a few affected littoral states in the region perceive China's claims on the disputed islands in the South China Sea to be more destabilizing and of more immediate concern. India can certainly capitalize from such sentiment.

Chinese Air Force: Structure and Modernization Plans

The Chinese Communist Party became involved in aviation in 1924, but the Peoples Liberation Army Air Force (PLAAF) came formally into being in November 1949. The PLAAF's primary mission is to defend China's land and air space as well as provide support to land forces. The Air Force has seven regional commands. Each command apart from its commander has a political commissioner. Lower down in the hierarchy, political positions are maintained within the service. The PLAAF is organized into five branches – aviation, anti aircraft artillery, SAM's, radar and communications.

The PLAAF has 26 Air Force academies and schools carrying out various facets of training. Entry to these institutions is on selection basis. Pilot training is carried out in three phrases: undergraduate training, transition training and operational unit training. Once in an operational unit a typical fighter pilot does 100-110 hours flying per year, an A-5 ground attack pilot-150 hours/year. Apparently pilots in operational units do not get enough flying practice to maintain a high state of readiness. As a consequence, pilots do not have adequate opportunity to practice new tactics demanded by advanced aircraft⁹. Moreover, although pilots used simulators, these were of very basic design and did not compare to those used by modern Air Forces. Evidently the PLAAF's training of logistics personnel also needs improvement. It was weak logistics that prevented utilization of air power in the Sino-Vietnamese conflict of 1979¹⁰. The logistics system is still oriented towards support of less complex operations than those perceived by China.

Modernization Plans

The PLAAF has recently embarked on a goal of modernization. She has bought air superiority fighters from Russia and plans to induct more state of the art aircraft. Efforts are underway to import new technology to improve the product of domestic industry.

The PLAAF's top priority is the acquisition of a nation wide air defense capability. This would mainly comprise Russian fighters. Besides, some force multiplier technologies are being sought from western aerospace and defense companies. The PLAAF has initially acquired 24

⁹ Jim Wilson, *The Chinese Air Force, Roadblocks to Modernization*, Research Report 1990, p 24

¹⁰ Kenneth W Allen, *PRC, PLAAF*, Research Paper, Apr 1991, pp 18-1 to 18-5

Su-27's. A further agreement was signed with the Russian Federation for six IL-76 transports. In May 1992 the Russian Federation agreed to supply China with an initial 24 MiG-31 long range interceptors and a further 48 Su-27's equipped with KH-31P hypersonic anti radiation missiles¹¹. The MiG -31's are expected to be assembled at a newly set up factory at Shenyang. This factory will eventually manufacture 200 MiG-31's.¹² Apart from the latest acquisitions the PLAAF comprises 3000 J-6's (MiG-19's), 250 J-7's (MiG 21's), 200 J-8's, 55 J-8 II, 500 Q-5's (MiG 19 Interceptor) and 650 Bombers (H5's, H-6's and Tu-4's); these are basically reverse engineered Soviet aircraft with some having Western upgrades.

China has also acquired Sergeant Fletcher aerial refueling drogue systems from Iran. An Israeli firm Bedek Aviation is installing these on board the Xian B/H - 6 D bomber/refueling tankers. Sources have also reported that China has set up a training base in aerial refueling at Zhanjiang.¹³ Concurrently, China is also interested in procuring 115 ex-Iraqi Su-25s and MiG - 27's now in Iran for possible acquisition in exchange for Chinese built tanks, artillery pieces, tactical missiles and air defense weapons for the Iranian forces¹⁴.

There are also reports of Israel having illegally transferred sensitive US aviation technology to China. China is developing a fighter called the F10 that is reportedly based on the Lavi – A joint Israeli-US fighter jet project that was terminated in 1987¹⁵. The most important Israeli developed equipment acquired by the PLA is the LAVI's EI/M-2034 multi-mode fire control radar developed by ELTA. This radar is planned to be installed on a new derivative of

¹¹ Edmond Dantes, *The PLA Air Force Build Up: An Appraisal*, Asian Defence Journal 11/94

¹² Prasun Sengupta, *China Expands Air Forces*, Military Technology 8/92

¹³ Julia A Ackerman and Michael Collins *Chinese Air Power Rev' Up*, Air Force Magazine Jul 93

¹⁴ Ibid

the Shenyang J-8-2 Finback fighter currently under development.¹⁶ In addition, ELTA is helping the PRC develop an AEW version of the Yun-8 turboprop by a retrofit involving conformal active phased array radars.¹⁷

China has shown an extremely high degree of skill in reverse engineering. When Soviet advisers withdrew in the early 1960's, they left factories unfinished. The Chinese demonstrated considerable skill in reverse engineering MiG-19's and later MiG-21's and building a small export market. Another outcome of this was a heavy self reliant attitude. Of the four modernization's that the country embarked upon, defense was on lowest priority. China all along has been a strong believer of 'Peoples War' – A war fought more biased towards numbers rather than quality of weapons. Consequently, she has produced vast numbers of weapons of average standard. There are two channels of arms procurement; the General Service Division run by the armed forces and the civilian aerospace industry. The two organizations generate their own foreign exchange reserves. As a result, not infrequently they work at cross purposes, with the civilian aerospace industry a poor second – Products not meeting defense specifications or, unable to meet laid down time schedules.

The Chinese aerospace companies want technology transfers. Quite understandably, Western firms are reluctant for fear of losing their dominance in the market. Furthermore technology transfers as the Peace Pearl program were terminated by US sanctions imposed after Beijing's crackdown on pro-democracy protesters in Tianamen during June 89. Under such

¹⁵ Barry Schweid, *Did Israel sell China U.S. Jet Technology*, , The Waashington Times, 5 January 1995

¹⁶ Ibid, Sengupta

¹⁷ Ibid, Dantes

conditions, the Chinese defense corporations blatantly ignore copyright and patent laws. They copy the technology anyway.¹⁸

Likely Chinese Air Strategy

The PLA's current strategy hinges on 'Peoples War under Modern Conditions'.¹⁹ The strategy basically relates to active defense and consists of taking tactically offensive action within a basically defensive strategy. It hinges on the land strategy of forward presence and perimeter defense. The defending forces undertake offensive operations in order to wear down the enemy while the enemy is strategically on the offensive and attacking. In this overall strategy the PLAAF's two primary roles in the active defense strategy are to provide air defense for the nation and to support the ground forces. Though the ground support role was defined, the PLAAF did not have a strategic air defense strategy till as late as Mar 91. In 1988 the PLAAF's SAM and AAA *Applied Research Center* published an article entitled "Exploration of An Air Defense Strategy." The article basically focused on three aspects of an air defense strategy, firstly, having a strong deterrent by way of effective SAM's, interceptors, AAA and ECM. The second aspect was to lay priority on SAM's, the weapon that is the most developed and popular air defense system. Counterattack against enemy bases formed the third part of this strategy.²⁰ One of the impediments at that time in developing a full fledged strategy may be the outdated equipment that the PLAAF possessed. However, the strategy is likely to be much more aggressive by the year 2000. This is so because by that time the PLAAF would have a complement of 72 Su-27's, 200 MiG -31's, an unspecified number of J-8-2 Finback fighters

¹⁸ Bai Si Yeng, *Understanding the Chinese Defense Industry*, Mil Tech 3/87

¹⁹ Ngok Lee, *China's Defense Modernization and Military Leadership*, pp139-74

along with aerial refueling capability that would provide her with enormous flexibility and punch. A reported development of cruise missiles would enhance this capability.

The PLAAF's primary objectives in a future conflict with India would be to prevent the Indian Air Force (IAF) from interfering in the PLA's ground campaign. A second objective would be to enhance the fire power of the PLA, in the Close Air Support (CAS) and Interdiction role. For the success of this strategy the PLAAF would focus on extensive offensive and defensive counter air.

China has shown an inclination to bargain her occupation of Aksai-Chin. The bargain involves a quid-pro-quo with the Indian border state of Arunachal Pradesh to which China also lays a claim. She also disputes some Indian territory in the central sector. During the last war in 1962 there was extensive ground action in both Aksai - Chin and Arunachal Pradesh. After the cease fire the Chinese withdrew in the Eastern sector to the position they were during the start of the war. In the Aksai Chin sector China still holds the areas captured during the 1962 war. In the central sector barring minor skirmishes, no large scale military action took place. China considers vital the retaining of the Line of Communication passing through Aksai-Chin that links Sinkiang with Tibet. Therefore she is likely to hold a defensive position in the Aksai-Chin sector and launch offensive operations in the Arunachal Pradesh sector. In any future conflict China will find it difficult to break through the present Indian defense positions in the two important sectors of Aksai-Chin and Arunachal Pradesh. This is because the mountain ranges in both sectors provide a formidable defense potential with critical choke points by way of high mountain passes. It is an accepted fact that to move and maintain large bodies of personnel in such terrain

²⁰ Ibid, Kenneth Allen

requires domination of these choke points. During the 1962 Sino-Indian conflict in the Eastern sector, the Chinese moved small bodies of soldiers via trekking routes to cut off the lines of communications of Indian troops. Though tactically sound and feasible, their success in this case was more as a result of poor leadership of the Indian forces rather than the maneuver itself.²¹ Consequently, other than air transported operations it would be very difficult for offensive land forces to move large bodies of supply and troops through mountainous terrain. A possibility in using maneuver to advantage would be to move heliborne forces that could sustain themselves for a short duration of time and could dominate vulnerable lines of communications in the rear areas. This facet of air land operations would see increasing application in such terrain.

Weather and terrain are other factors that would govern the intensity of air operations. The North East sector of India has heavy rainfall during the monsoons. If the pre monsoon and post monsoon seasons are included, then between March and October only restricted air operations can be done. Relatively, the Aksai-Chin region is a high altitude desert and gets meager rainfall. The Tibetan terrain poses severe limitations in aircraft operations. Aircraft operations from airfields with average elevations of 13000 feet would reduce the maximum weapon load. This problem could be offset to a large extent if strike aircraft take off with a combination of minimum fuel and maximum weapon load and are air refueled once airborne. China's procurement of this force multiplier would considerably offset such a limitation. Thus, not only would her strike forces be able to operate almost unencumbered from such bases, but they would also benefit by way of increased Radii Of Action (ROA). This would permit them to engage targets deep inside Indian territory. For air defense operations this would improve the

²¹ Maj Gen Rajendra Nath, PVSM, *Military Leadership in India*, Pp 311-370

already awesome capability of the vast numbers of Su-27's and MiG-31's that the PLAAF would be operating by the year 2000. Accordingly, were the PLAAF to use her strike and air defense elements in the role that she foresees she would have remarkable flexibility. Long term interdiction of targets in the plains of India bordering the Himalayas could prove very advantageous.

The PLAAF lays heavy weightage on CAS. However for most periods of the year in the North Eastern sector the weather would impose severe limitations on the ability of jet aircraft employed for CAS operations. Terrain would be another factor hampering operations in the mountains. Utilization of attack helicopters in such terrain could compensate the shortcomings of fixed wing aircraft. These could be employed not only in CAS operations but also short term interdiction. The forest cover in the Eastern sector provides ideal country for guerrilla type operations. Guerilla teams could be infiltrated/exfiltrated as well as re-supplied by helicopters.

China has a well-developed space program with a capability of putting satellites in geostationary orbit. She has also launched satellites in low earth orbit and sun synchronous orbits. This capability would provide her in another five years a fairly advanced Strategic Reconnaissance capability. Tactical ballistic missiles and cruise missiles would add to her punch.

Countermeasures by India

India at the cost of some of her social development programs has kept pace in modernizing her Air Force. The drive for this has been more because of a policy of brinkmanship

from her Western neighbor Pakistan rather than China. As a result, the current threat perception of the Indian Air Force (IAF) is biased more towards countering a short term threat emanating from her Western borders.

India has 2 squadrons of Mirage-2000's, 3 squadrons of MiG-29's, 5 squadrons of Jaguar's, 11 squadrons of MiG- 27/23's and 19 squadrons of MiG-21's²². The IAF has a large and modern transport and helicopter fleet mainly of Soviet origin. The transport and helicopter fleets have a major task of undertaking air supply for the troops located in the inaccessible areas of the Himalayan borders. The helicopter fleet also includes Mi-25 and Mi-35 attack helicopters.

India's defense industrial base has a well established aircraft industry. MiG-21's, MiG-27's, Jaguars and Alouette helicopters have been license produced. The Hindustan Aeronautics Limited (HAL) a state run enterprise is developing a Light Combat Aircraft (LCA) that would replace the MiG-21's. The LCA is behind schedule and a prototype would in all likelihood undertake its first flight in 1996. Induction into front-line squadrons is planned in the beginning of the next decade. Because of the delay, an interim solution of the MiG-21 upgrade project has been approved. Consequently, the IAF would enter the twenty-first century with a large inventory of MiG-21's albeit with a fairly advanced look down shoot down radar, inertial navigation system, close combat and BVR missiles.

The IAF has always been weighted heavily towards offensive air operations. During any hostilities India cannot commit her entire Air Force on one front against China. She will perforce have to plan sufficient reserve forces to counter any moves by Pakistan. With the

balance of the forces she would undertake to neutralize the important Chinese air fields in Tibet. It may be difficult to gain air superiority in the Tactical Battle Area (TBA), however it would be possible to achieve a Favorable Air Situation for limited periods of time.

The IAF in some respects would have a relative advantage over the PLAAF in regard to air operations. This is particularly so for aircraft operating from the plains of the Central and NE sectors bordering China. These aircraft would not have a maximum load penalty as compared to those operating from airfields at high elevations. In the Aksai Chin sector India faces such a limitation for offensive capability because of the high elevation of the launching bases. With a fairly potent striking power, the IAF could bring about meaningful results in her counter air operations. However, a relative disadvantage that she would face would be in finding suitable counter air targets within the ROA of her strike forces. This is particularly important in view of the fervent efforts underway in China to operationalise air to air refueling. China in all likelihood would base her strike elements in relatively secure locations well beyond the ROA of the IAF strike forces. The advantages of air to air refueling accruing to the PLAAF would degrade the effectiveness of IAF counter air operations. This would show up as a serious limitation for the IAF strike forces. Consequently in regard to CAO there may develop an asymmetry that favors China. India has viewed air to air refueling as unnecessary because in her threat perceptions, there did not exist a threat that required such a capability for neutralization. However, the situation has become totally different in countering a threat from the Chinese Air Force. India would therefore need to acquire an air to air refueling capability to negate the advantages that accrue on this count to a potential adversary.

²² Brassey's, *The Military Balance 1993-1994*

The IAF has the latest interceptor aircraft and she would be able to prevent any domination of the Indian airspace. However, the IAF does not have any AEW at present and radar cover would be marginal over mountainous terrain. Degraded GCI performance in these areas could hamper the air defense of the Tactical Battle Area (TBA). At best the ground forces would have to increasingly rely on integral AAA and SAM's. For the past few years, the defense industry in India has been developing an AEW aircraft. India would need to hasten this in view of reports that the PLAAF is negotiating with Russia for the acquisition of the IL-76 Mainstay.

Interdiction operations in the Tibetan plateau should pay good dividends. MiG-23's/27's, MiG-21 and Jaguars could be effectively employed in this role by the IAF. CAS operations in the NE sector are likely to be hampered because of the terrain and the prevailing weather. In the Aksai Chin sector shortage of IAF airfields in the vicinity of the TBA would reduce the available effort, though attack helicopters would prove effective in both sectors. Heliborne operations could pay rich dividends in moving small forces for sabotage behind enemy lines.

India would also have to invest in more modern Electronic Warfare equipment and develop or purchase anti-radiation missiles. Her battlefield tactical missile Prithvi is a good addition to her offensive capability. India has also produced a pilotless target aircraft that could with more refinements be modified to a first generation cruise missile. Besides, she has recently launched a satellite in sunsynchronous orbit with a military reconnaissance capability; she must continue her efforts at improving her strategic reconnaissance expertise.

Nuclear Aspects

India has not signed the Non Proliferation Treaty. She considers the treaty discriminatory for the treaty allows the haves of the exclusive nuclear club to continue testing and arming themselves with nuclear weapons, whereas, the have-nots cannot do so. Moreover, by endorsing the treaty India foregoes her nuclear option and puts herself in a weak bargaining position to a future border settlement with China. China has adequate strategic and tactical nuclear weapons both ground and submarine launched to have a second strike capability against a superpower. Though China has stated that during any future conflict she will not be the first nation to employ nuclear weapons, yet, such statements cannot be taken totally on face value. Besides, the question of India's strategic equation with China is linked to that it has with Pakistan. If because of Pakistani achievement of nuclear capability, India too decides to weaponise, then this would lead to a grossly inferior nuclear India as compared to China.²³ The earlier Prime Minister of Pakistan Nawaz Sharif publicly declared that Pakistan has an atomic device. Under these circumstances, it would be a monumental folly on India's part not to weaponise. India has no confirmed nuclear arsenal and even if she was to do so, she would not be able to bridge the gap with respect to China. Viewed from this standpoint India must shed her peaceful non violent *Ahimsa* image and achieve a minimum level of deterrence in respect to China. India also has a fairly successful space program going and she could certainly make use of parallel technologies in order to achieve a credible delivery system.

Conclusion

²³ Akhtar Majeed, *Indian Security Perspectives in the 1990's*, Asian Survey, VolXXX, No 11. November 1990

Notwithstanding the present improvement of Sino-Indian relations India's border problem with China may not be easily resolved. With China's increasing economic and military might it would be wishful thinking on India's part to expect China to vacate Aksai-Chin. As a result China would constitute a long term threat to India and must worry her. Nonetheless, India can take satisfaction in the fact that her armed forces are considerably different in equipment, training and leadership than those encountered by the Chinese in 1962. The Himalayan range provides a unique and immense defense potential that was not fully exploited in the last war. If India was to adopt the Clausewitzian norm of 'Defense is the stronger form of warfare', she would stand in good stead.

Despite the routine modernization of the Indian Air Force the military leadership must urge the powers that be for more state of the art acquisitions so as to counter the likely threat that may emerge from her Northern frontier. India would also require to be more categorical on the nuclear issue. Quite clearly her two neighbors possess nuclear weapons and these can only be countered by achieving a minimum level of deterrence.

MAPS: (ATTACHED)

1. China-India Border
2. China-India Border: Western Sector
3. China-India Border: Eastern Sector

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